

Further, Applicant incorporates by reference previous traverses of the rejections of the claims.

Rejection of claims under 35 U.S.C. 103

The Examiner rejected claims 1, 4 and 6 under 35 USC 103(a) as being unpatentable over Alford in view of Raith et al. for the reasons noted in paragraph 3 in the last office action.

The present invention is directed at a method and system of optimizing the prioritizing of cells that are available to a specific terminal, i.e., a mobile telephone, based on information stored in a network database relative to that terminal, information that is updated frequently, that is terminal-specific information and which is transmitted to the specific terminal for use in selecting a priority cell or a cell to be favored.

This terminal-specific information maintained at the network and also provided to the mobile telephone is in contrast to cell-specific information that is transmitted to all registered terminals within the cell and which all the terminals similarly use in making decisions such as a handover, etc.

An example of such terminal-specific information is noted on page 13, lines 1 to 11, where a terminal, a mobile telephone, operates, in general, within a "home area" like work and at home. Cells in this area would have equal value and the home area information would be stored in the network database associated with this terminal and updated. These cells would be identified as priority cells versus non-priority cells, for example, and the terminal would display specific information based on which cell has the best coverage. Based on this information, the specific terminal would know which cells to contact, if in fact, there are multiple cells, i.e., overlapping cells, within that home area.

Also noted is the example where the cell phone moves quickly through a possible priority cell, page 12, lines 1 to 19, and the operator of the system programs the computer to calculate the C2 value so that such a cell phone will not consider that cell a priority cell for connection thereby decreasing the number of attempts or connections to the system by this user. As noted, "it is possible to find other corresponding situations in which the system operation can be optimized by selecting parameters relating to individual devices." Clearly, this terminal-specific information must be provided to that terminal to control its actions. This would not be cell-specific

information because other terminals not using the present invention would not take such action.

A further example of the present invention is disclosed on page 8, line 30 to 35 and page 9, lines 1 to 20, where a PI message is sent to a mobile phone after it registers on the network and the network knows of its location in the location database. The priority cells identified would be sent to the mobile phone and the database would be updated.

In the rejection of the independent claims 1, 4 and 6, the Examiner cited Alford which discloses a method of sending cell-specific information from a multi-cell communications system to a communications receiver, such as a mobile telephone. In one embodiment, the receiver monitors a current or host radio signal. In order to determine if this is the preferable signal as far as signal strength, the receiver will monitor for a first period of time, a cell of preference signal from a cell beacon. If a cell beacon is received and if a controller in the receiver determines that this is a cell of preference signal, the receiver will continue to receive the cell of preference signal beyond the first period of time; otherwise the receiver will remain tuned to the current or host signal.

The selection of a particular cell of preference may be preprogrammed into the radio, and as such, be transparent to the end user, or the radio may comprise an actuator for selecting one of a plurality of indicia of cells of preferences stored in the memory.

In summary, the Alford patent does not disclose any terminal-specific information but only the providing of cell-specific information such as what signals are cell of preferences to the mobile units.

Further, the Examiner states that Raith teaches a system for cell selection in which the network, through a base station stores and transmits on the control channel information on the characteristics of a cell of preference for a mobile station to determine which cell to lock-on to.

The Raith et al. patent does not disclose any terminal-specific information transmitted to the mobile stations. In particular, column 6, lines 41 to 54, clearly describes the information provided by the broadcast channel of the control channel transmitted from each cell. This information is noted as either "absolute" or "relative" information and only relates to the cells. Every terminal that receives the same control channel

transmission will receive exactly the same cell-specific information, and the received cell-specific information will have exactly the same relevance to all terminals that are similarly located.

The Applicant in claims 1 and 4 specifically states, "arranged to favor at least one cell based on data specific to that terminal stored in and received from the network ... in a manner independent of cell selection by other similarly located terminals." The Applicant in claim 6 further states, "to favor at least one cell based on data specific to that terminal stored in and received from the network in a manner independent of cell selection made by other similarly located terminals." Thus Applicant's claim language is terminal-specific and not cell-specific as disclosed by the cited references.

Therefore, the combination of the above references do not teach or suggest the present invention of providing terminal-specific information to the mobile stations. Both references are directed at providing cell-specific information.

The Examiner rejected claims 1, 4 and 6 under 35 USC 103(a) as being unpatentable over Alford in view of previously cited

reference of Leih et al. for the reasons noted in paragraph 4 of the last office action.

Applicant's comments as to Alford and incorporated herein.

The Leih reference notes that the network maintains a preference list for each user so that from this preference list it is possible to conclude which communication domain a certain terminal should prefer. There is no suggestion of transmitting any information about the terminal-specific preference list to the terminal. Based on the stored preference list, the network may direct a handover to another base station. The network compares the list of available base stations to the preference list maintained therein. If the comparison shows that the terminal would receive more advantageous service from another base station than the one it is currently communicating with, the network will command the terminal to perform a handover to the other base station. The terminal is not informed of the reason for the handover.

The Leih reference requires that each terminal transmits a list of base stations identifiers to the network each time when a change occurs in the list of base stations that the terminal is able to receive. This updating is normally a waste of time

since the change does not bring about anything new regarding cell preference.

On the contrary, in the present invention, the network only transmits to the terminal the terminal-specific information every now and then. When a change occurs in the list of base stations that the terminal is able to receive, it is the terminal that makes the comparison and calculations without the need of transmitting anything, anywhere just to indicate the change occurred.

The Leih reference does not provide any reason for the terminal-specific information to be sent to the terminal nor suggest that such be done.

Therefore the above combination does not suggest or teach the presently claimed invention in claims 1, 4 and 6.

The Examiner rejected claims 3 and 7 under 35 USC 103(a) as being unpatentable over Alford and Leih et al as applied to claims 2 and 6 above, and further in view of Takahashi et al. for the reason noted in paragraph 6 of the last office action.

The Examiner notes that Takahashi discloses a system for selecting an access channel for communications in which information relating to a channel is provided during call origination call reception.

The above traverses are incorporated as to Alford and Leigh et al.

Takahashi in column 4, line 20 to 29, notes that the control circuit 30 detects the SID transmitted from the base station. The control circuit 30 being in the radio telephone. The SID is compared with the SIDH stored in the ID-ROM 33 which was previously transmitted from the base station. When the SID coincides with the SIDH, the control circuit 30 outputs information that the apparatus is located in a home area and if not, it will indicate that the apparatus is in a roam condition. A similar process is noted as to the paging channels and the access channels. A further process is noted during call origination and call reception where the access channels are compared to the home paging channels to see if there is coincidence. It is further not shown how any other terminal similarly situated would change its operation, and the process shown provides the mobile telephone with the best channels in a home area and in the roam areas.

Therefore the above combination does not suggest or teach the presently claimed invention in claims 3 and 7.

The Examiner rejected claims 5 and 8 under 35 USC 103(a) as being unpatentable over Alford and Leih et al as applied to claims 4 and 6 above, and further in view of Wang et al. for the reason noted in paragraph 7 of the last office action.

The Examiner noted that Wang discloses a communication system that uses indexes in determining cells which are considered part of a preferred list for a customer paging area for a mobile subscriber.

As noted in Wang, the system maintains an updated customer paging area based on tracking the mobility pattern of each message subscriber unit in the coverage area. Based on this information, the appropriate cells are placed in a preferred cell list based on this pattern.

This reference does not suggest or teach any terminal-specific information being transmitted to the user and teaches a system for changing the preferred cell list based on use by the user.

The Examiner rejected claims 9 and 10 under 35 USC 103(a) as being unpatentable over Alford and Leih et al. and Wang et al. as applied to claim 8 above, and further in view of ETSI and ETS 300 535 for the reason noted in paragraph 8 of the last office action.

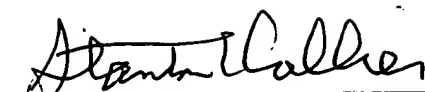
The Examiner states that it is known in the art to use cell re-selection hysteresis and the use of a delay factor in calculating parameters relating to cell re-selection as taught by GSM 03.22 version 4.10.0

Applicant respectfully asserts that the base claim 6 is patentable in light of the above remarks and since claims 9 and 10 are dependent therefrom they should also be allowable.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

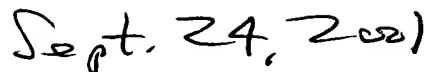
The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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